1410.16 Novell Server Naming and IPX Network Addressing Standard
Issued January 6, 1997

SUBJECT: Novell Server Naming and IPX Network Addressing Standard

APPLICATION: Michigan State Government Agencies

PURPOSE: To facilitate the efficient operation of Novell Servers connected to the State
                        Metropolitan and Wide Area Networks

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SUMMARY: The purpose of this Novell Server naming and IPX network address standard is
                        to facilitate efficient State network operations. Its primary intent is to solve the
                        following problems characteristic of inter-connected Novell networks:
- Often Novell NetWare Local Area Networks are initially configured using default IPX server addresses and names provided by Novell. When these servers (with the same assigned default address) are inter-connected via the State Wide Area Network (WAN) and the Lansing Metropolitan Area Network (LMAN), routing conflicts and network addressability problems occur.
- A second problem, characteristic of Novell Networks connected across wide area network links, is high bandwidth consumption due to the overhead imposed by Novell's Routing Information Protocol (RIP) and Service Advertising Protocol (SAP) broadcast traffic. Efficient WAN and LMAN network operation often require filtering RIP and SAP traffic. Efficient filtering and ease of administration requires standardized server names and network addresses.

Novell Server Naming and IPX network address standards follow. These standards will become obsolete when vendors, such as Novell, convert their network operating system base protocols to the Internet TCP/IP protocol, which is the State protocol standard.

PROCEDURE:

General Information:
- NOVELL IPX NETWORK ADDRESS STANDARD
  - This standard is designed to reduce routing complexities encountered during implementation of both LMAN and the CBDS network. It will ensure that no duplicate IPX network addresses exist.
  - DIT administered IPX Internal and Cable network addresses are intended for use wholly within the State internetwork. This four byte Novell IPX standard format will be used to create unique addresses for Novell IPX networks connected via the Lansing Metropolitan Area Network (LMAN) and Ameritech's Connectionless Broadband Data Service (CBDS - a wide area LAN-to-LAN interconnect service). The IPX standard network address format is an eight hex character address. The model for the State is: LA AT ZZ ZZ.

POSITION	CODE	MEANING	EXPLANATION
1	L	LATA Designation	See LATA Table below for hex codes
2 - 3	AA	Agency Code	See Agency table below for hex codes
4	T	Network Type	This 4th position will be used for optimizing the IPX filters, improving both security and network efficiency. The acceptable code values are:

			0=Cable
			1=Server
			2=WAN Cable
			3=WAN Server
5-8	ZZZZ	Variable	These 4 positions are assigned to the agency network address by the DIT Network Address Administrator (NAA) and the agency technical specialists. The letter "A" cannot be used in the 5th position (leftmost "Z").

INSTRUCTIONS: This format must be completely filled; i.e. there must be eight 4 bit hex characters in this address format. There must be not be any embedded spaces in this address.

- For newly connected networks, standard addresses should be assigned using this format. For existing network addresses, conversion to this standard will be necessary. IPX Cable Network Addresses are acquired from and assigned with the assistance of the NAA. These addresses are assigned to inter-connecting cables between a router and the network distribution system (Ethernet hub, token ring MAU, LAM, or CAUI). This address must be unique within the State network architecture.

- NOVELL SERVER NAMING STANDARD

- Following is the standard format for Novell Server names. Server names are used in routers primarily to filter SAP and RIP broadcast traffic. The use of short, Internet Domain names allows for shorter filter statements thereby decreasing router latency attributable to filtering. Also, standard names allow standard masking to be employed router filter statements, further reducing latency due to filtering. The Agency Table, below, lists Agencies with their corresponding Internet Domain Names. These short domain names are used in naming agency Novell servers as follows:

- Novell Server Name Model: AAAAAAAAA_NNNNNNNNNNNNNNN_SSS or AAAAAAAAA_SSS
- AAAAAAAAA (Agency Internet Domain Name (first or first.second level only)) must be the 3-9 character code from the Agency Table below. These names conform to the Internet Domain Naming Policy, DMB Procedure 1310.20. Agency Domain names are registered with DIT Telecommunications and Network Management (T&NM) in their Domain Name Server.
- NNNNNNNNNNNNNNN (Sub-Network ID) is optional and may be up to 15 alphanumeric characters long. It is created by agencies to assist in administration of large numbers of servers. This optional ID field could be a unique site, building, application, geographic area, user community, etc. It is useful in creating SAP filters, thereby decreasing overhead traffic in wide area networks.
- SSS (Server type ID) should reflect the server function, and may include a numeric to differentiate multiple servers at the same location; Example: FS1 (File Server 1), CS2 (Communication Server 2), etc.

LATA TABLE

LATA NAME	CODE	LATA NUMBER
Detroit	D	340
Upper Peninsula	2	342
OHIO	3	
Saginaw	4	344
Wisconsin	5	
Lansing	6	346
Grand Rapids	8	348
Out of State	9	

AGENCY TABLE

AGENCY NAME	"AA" CODE	INTERNET DOMAIN NAME
Aging	01	AGING
Agriculture	02	MDA
Ameritech IntraLATA Services	Ax	AMRINTRA
Attorney General	03	AG
Auditor General	04	AUDGEN
Child Support Enforcement System	34	CSES.JUD
Civil Rights	07	MDCR
Civil Service	08	DCS
Commerce	05	COMMERCE
Consumer & Industry Ser. (Labor, Comm)	23	MCIS
Corrections	06	CORR
DIT InterLATA Back Bone Svcs	Bx	DMBWAN
DIT LMAN (Extended) Backbone Svcs	Dx	DMBLEXT
DIT LMAN (Prime) Backbone Svcs	Cx	DMBLPRIME
Education	16	MDE
Executive Office	18	MIGOV
Family Independence Agency (DSS)	20	FIA
House Fiscal Agency	21	HFA
House of Representatives	22	HOUSE
Housing Development Authority	19	HDA
Jobs Commission	25	MJC
Legislative Service Bureau	29	LSB
Library of Michigan	24	LIBOFMICH.LIB
Lottery	28	MSL
Low Level Radioactive Waste Authority	32	RWA
Management & Budget	10	DMB
Mich. Empl. Sec. Comm.	17	MESC
Military Affairs	09	DMA
Natural Resources	12	DNR
Ofc of Community Corrections	31	OCC
Public Health	14	MDPH
Senate	35	SENATE
Senate Fiscal Agency	36	SFA
Social Services	15	DSS
St. Court Admin's Office	27	SCA.JUD
State	37	SOS
State Police	30	MSP
Substance Abuse	33	SUBABUSE
Supreme Court	26	SC.JUD
Transportation	13	MDOT
Treasury	38	TREAS

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